

IN THE CLAIMS

Claims 1-20 Cancelled

Claim 21 (New) A method of making a magnetic recording medium comprising:

depositing a magnetic layer on a substrate;

depositing a first portion of a carbon-containing overcoat directly on the magnetic layer;

and

depositing second portion of the carbon-containing overcoat under the following deposition condition:

$$Y \geq 0.7764 X^{0.5639}$$

wherein, Y is a thickness of the first portion of the carbon-containing overcoat and X is carbon ion energy per carbon atom in eV during said depositing second portion of the carbon-containing overcoat and

the carbon-containing overcoat comprises a first carbon density and a second carbon density different from the first carbon density.

Claim 22 (New) The method of claim 21, wherein said depositing a carbon-containing overcoat comprises increasing the carbon ion energy as the thickness of the carbon-containing overcoat is increased.

Claim 23 (New) The method of claim 21, wherein the carbon-containing overcoat has a thickness of about 150Å or less on the magnetic layer and the first carbon density is about 1.8 g/cm³ or less.

Claim 24 (New) The method of claim 21, wherein the carbon ion energy is

increased from a first range of less than 50 eV to a second range of more than 50 eV during said depositing a carbon-containing overcoat.

Claim 25 (New) The method of claim 21, wherein the first carbon density is a

density selected from the group consisting of about 1.75 g/cm³ or less, 1.7 g/cm³ or less, 1.65 g/cm³ or less and 1.6 g/cm³ or less.

Claim 26 (New) The method of claim 21, wherein the second carbon density

comprises a density selected from the group consisting of at least 1.8 g/cm³, of at least 1.85 g/cm³, of at least 1.9 g/cm³ and of at least 1.95 g/cm³.

Claim 27 (New) The method of claim 21, wherein the carbon-containing overcoat

comprises at least a first carbon layer and a second carbon layer.

Claim 28 (New) The method of claim 27, wherein the first carbon layer is closer to

the magnetic layer than the second carbon and the first carbon layer is deposited using a sputtering process.

Claim 29 (New) The method of claim 27, wherein the second carbon layer is on the

first carbon layer and is deposited using a deposition process selected from the group consisting of plasma-enhanced chemical vapor deposition, ion beam deposition, and filtered cathodic arc deposition.

Claim 30 (New) The method of claim 27, wherein the first carbon layer comprises a

first carbon density and the second carbon layer comprises the second carbon density, the second carbon density being higher than the first carbon density.